REMARKS

Claims 13, 14, 19 and 20 currently remain in the application. Claims 1-12 and 15-18 have been canceled, and no claims are herein amended.

Claims 13, 14, 19 and 20 were rejected under 35 U.S.C. 103 over Mahoney in view of Matsuo and Atsushi. The Examiner seems to be of the opinion that Mahoney discloses every inventive element of the claims being rejected except that "the main component of the ceramic material includes at least two materials selected from the group consisting of Mn, Ni, Co, Fe, Cu and Al and having specific resistance of 200Ω·cm or less", that Matsuo discloses ceramic materials with the characteristics described within the parentheses above, and that Atsushi discloses compositions having superior heat resistance and anticorrosion characteristics, including ceramic materials including oxides of Al, Ni, Co and Fe and metallic powders including metals such as Fe. In summary, the Examiner seems to be concluding that the invention of the present application is obvious since it uses Matsuo's materials as the ceramic materials of Mahoney's structure and Atsushi's material having the same main components as Matsuo's material being superior in anticorrosion characteristic and containing Fe, Ni, etc. as the high resistance layer.

Applicant argues as follows.

Firstly, Atsushi relates to semiconductors obtained by covering the surface of ceramic particles with a ferrite component and using such ceramic particles. In other words, Atsushi's invention does not related to the formation of a high resistance layer on a ceramic base material but to ceramic particles with their surface covered with a ferrite component in order to obtain a ceramic base material. If such ceramic particles covered with the ferrite component are molded and heated to 1200-1500°C, the ferrite and ceramic components are melted together uniformly and the result is not a high resistance layer formed on the surface of a semiconductor (ceramic) base material. Thus, the formation of a high resistance layer separate from the ceramic base material is not obvious from the description by Atsushi.

Secondly, there is no description in the cited references regarding the resistance value of the semiconductor material that is obtained such that the reader cannot ascertain whether the

specific resistance is above 200Ω·cm or not. The Examiner may be of the opinion that it is obvious to a person skilled in the art to use this superior material as the high resistance layer since it has anticorrosion characteristic, but having anticorrosion characteristic alone is not sufficient for obtaining the effects desired by the present invention if the high resistance layer has lower resistance than the ceramic base material. The purpose of this invention is to prevent plating materials from depositing on the surface of the ceramic thermistor element at the time of electrolytic plating and the surface corrosion of the ceramic thermistor element. These are occurrences expected when the specific resistance of the ceramic thermistor is low. If the specific resistance of the surface of the ceramic thermistor is low, the electrically conductive plating component will become deposited through the surface of the ceramic base material. In other words, although Atsushi may describe a material having anticorrosion characteristic, if its resistance is about the same as or lower than that of Matsuo's semiconducting ceramic material, plating material will become deposited and corrosion will take place at the time of electrolytic plating. Thus, it is totally unclear whether Atsushi and Mahoney can provide the kind of high resistance layer of the present invention and one cannot hastily conclude that they had the required motivation for combination.

The invention of this application has the following characteristics (inventive elements):

(1) The thermistor element is obtained by using a thermistor material comprising as principal component oxides containing two or more metals selected from the group consisting of Mn, Ni, Co, Fe, Cu and Al and having a specific resistance lower than 200Ω·cm;

(2) The high resistance layer is obtained by using another thermistor material including one or more oxides containing two or more metals selected from the group consisting of Mn, Ni, Co, Fe, Cu and Al and including also at least one metal selected from the group consisting of Zn, Al, W, Zr, Sb, Y, Sm, Ti and Fe;

(3) The thermistor element and the high resistance layer are baked together; and

(4) The material for the thermistor element and the material for the high resistance layer have the same principal component.

According to the present invention thus characterized, it becomes possible to prevent the plating material from depositing at the time of electrolytic plating and also to prevent corrosion

and to obtain a reliable thermistor with superior combination characteristic since the high resistance layer and the ceramic base material are substantially the same material and baked together.

It is believed that the cited references do not disclose such characteristics even if they are considered in combination and hence that the application is allowable in spited of these cited references.

Respectfully submitted,

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